San Francisco Chronicle – Peter Fimrite questions asked 5/11/2015

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1. **What is the status of radiation from radiological testing at Hunters Point?**

In 2004, a Historical Radiological Assessment identified 91 sites and areas that had possible radiological contamination at Hunters Point Naval Shipyard. Since that time, the Navy has been evaluating and cleaning up these sites. The Navy has removed 28 miles of sanitary sewer and storm drain lines in support of the investigation of radiological contamination at the Shipyard. Only 2% of the piping required disposal as radioactive waste. Approximately 300,000 cubic yards of soil around the piping have been excavated and tested. Only 5% of soil required disposal as radioactive waste.

2. **Has it all been cleaned up? Will all of it ever be cleaned up?**

To date, investigations have been completed at 92% of the sites. The Navy will continue its work until all sites with possible radiological contamination will be investigated and any radiological contamination found is cleaned up.

3. **What about the affordable housing going in there? Is there any contamination left in that area?**

Residential uses will only be permitted in areas when all the non-naturally occurring radiological material is removed from an area, which achieves "Unrestricted Free-Release" status. To achieve this, sites must be characterized by performing surveys and laboratory tests; regulatory oversight agencies must review the site results; and a letter must be submitted to document final approval. When a site receives Unrestricted Free-Release, the land is available for any future use without restrictions.

4. **I understand there will be some restrictions forever in the area as a result of radioactive contamination. Is that true? Where?**

In some cases, low-level radiological contamination cannot be removed. The "contain in-place" site remedy has been selected at Installation Restoration (IR) Sites 01/21, IR-02, and IR-7/18 and includes a clean soil cover which will be managed long-term.

5. **What about the radioactive contamination that could not be removed and had to be covered up? Can you explain how and where that was done and what restrictions there are in that area?**

To prevent contact with low-level radiological contamination, the Navy uses radiological controls, such as covering residual contamination with several feet of clean soil (containment) and/or land use controls, to prevent contact. These could include a demarcation layer underground that clearly separates the clean soil layer. These areas will obtain "Restricted Release," which means that certain land uses (e.g., residential) and activities (e.g., digging below certain depths) will be restricted at the site to ensure the contain-in-place remedy remains protective.

6. **Residents of Bayview Hunters Point have complained repeatedly about illnesses that they believe was caused by the Navy's operations over the decades. Are any of their claims valid?**

While we can't quantify exposures of residents over the past decades, the comprehensive risk assessments studied potential health effects through breathing, skin contact, drinking, and other pathways for exposure to contaminants of concern at the site now. Currently, the Shipyard is closed to the general public with exceptions for special events. The Hunters Point Shipyard Artists along with a few other tenants are allowed to occupy certain buildings at the Shipyard. These lease spaces were investigated for contaminates and were cleared for occupation.

However, during the construction of the selected remedies, the Navy implements several on-site controls and procedures at HPNS to ensure the public stays safe. In addition to the strategies listed below, individual oversight agencies monitor the cleanup and the California Department of Public Health collects its own confirmation samples from radiological cleanup sites for independent verification. The Navy conducts daily monitoring for air quality, both upwind and downwind to test for both particulates (such as dust) and radiological contamination. Misting systems are used to wet down work areas and roads, and stockpiles of soil are coated with a biodegradable polymer to minimize windblown dust. All truck beds containing soil (even clean soil) are required to be covered. A tire wash station also helps remove excess dirt and dust from truck tires as they leave the site. In addition, a Navy contractor provides daily street sweeping, and operations are shut down when conditions become too windy. Trucks entering and leaving the Shipyard must pass through a portal monitor which screens for radiation.

7. **Is the Naval Radiological Defense Laboratory (NRDL) the reason the EPA declared a Superfund site on Hunters Point What effect did that lab, the decontamination work on ships exposed to radiation during atomic bomb tests and the testing on living organisms of the effect of radiation have on the site? Also, what was learned those studies? Was it worth it?**

The EPA added the Hunters Point Naval Shipyard to the National Priorities List in 1989 due to a number of reasons. Primary contaminants consist of pesticides, heavy metals (such as lead and zinc), polychlorinated biphenyls (PCBs), and volatile organic compounds (VOCs). Much of the soil at the Shipyard originated from grading and flattening the nearby hills containing rock and soil known as Serpentinite. Serpentinite rock contains naturally occurring asbestos and metals such as iron, nickel, zinc, and manganese.

Likely due to the activities of the NRDL, radionuclides such as Radium-226, Cesium-137, and Strontium-90 have been detected in low concentrations in soil and inside storm drains at the Shipyard. Buildings associated with the Naval Radiological Defense Laboratory (NRDL) activities or buildings associated with radium paint application were identified as areas or sites for further investigation under the HRA. Only 33 of 420 investigation areas required remediation for radiological contamination. This is the equivalent of 8% (about 80 square feet) of surveyed units.

The Navy would be a more appropriate source regarding your questions: "Also, what was learned those studies? Was it worth it?"